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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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47372	7590	04/06/2005	EXAMINER	
BIRCH, STEWART, KOLASCH & BIRCH, LLP			LEVITAN, DMITRY	
8110 GATEHOUSE ROAD			ART UNIT	
SUITE 100 EAST			PAPER NUMBER	
FALLS CHURCH, VA 22042-1248			2662	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,528

Applicant(s)

PAN ET AL.

Examiner

Dmitry Levitan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-29 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-17 is/are rejected.
- 7) ☒ Claim(s) 7 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Amendment, filed 12/08/04, has been entered. Claims 1-29 remain pending.

Specification

1. In light of the Applicant's amendment, the objection to the specification has been withdrawn.

Claim Rejections - 35 USC § 112

2. In light of the Applicant's amendment, the rejection of claims 8 and 17 under 35 U.S.C. 112 second paragraph has been withdrawn.

Claim Rejections - 35 USC § 103

3. Claims 1, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao (draft-ietf-pwe3-requirements-03.txt, June 2002).

Xiao substantially teaches the limitations of claim 1:

A method of transporting packet data and command messages through a network connection between edge nodes (PWE3 reference model 1.1.), comprising:

Establishing a pseudo-wire directly over the connection between edge nodes (Pseudo Wire on Fig 1 and Terminology 1.2.);

Tunneling the packet data within established pseudo-wire over the connection between edge nodes (PSN Tunnel on Fig. 1 and Terminology 1.2.);

Tunneling command messages between the edge nodes (using tunneling sessions in setup and teardown of Pseudo Wires 3.1.).

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draft-ietf-pwe3-requirements-03.txt does not teach the network connection as optical and transporting the command messages within the same optical connection.

Official notice is taken that using optical connection and the same optical connection for data and commands is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add transporting the command messages within the same optical connection to the system of Xiao to utilize existing optical connections and conserve the system bandwidth.

Regarding claim 5, Xiao teaches negotiating an encapsulating label for the packet data to be transmitted between the edge nodes and utilizing the label for the packet data (both endpoints must agree on methods for encapsulating PDUs/label 3.1. and inherently utilize the label, because utilizing known encapsulation labels is essential for data packet tunneling).

Regarding claim 6, Xiao teaches associating the tunneled packet data with a corresponding tunneled command message (inherently part of the system because the command, for example, setup message is associated with establishing the tunneled packet data communication – PSN tunnel on Fig. 1 and 1.2.).

4. Claims 8-12, 16 and 17 are rejected (as understood) under 35 U.S.C. 103(a) as being unpatentable over Xiao.

Regarding claims 8-12, Xiao substantially teaches the limitations of claims 8-12. A method of transporting a customer data flow (Fig. 1) including a sequence of associated data packets (delivering packets in order 2.2.) over a communication network (Fig. 1 and 1.1.), comprising:

Terminating client frames in the flow holding the sequence of data packets (dropping L2 or L1 header information 2.1.);

Appending an encapsulation label to the packets whose client frames have been terminated (encapsulation 2.1.);

Originating a connection between edge nodes (PSN tunnel on Fig. 1);

Transmitting the data packets with the appended encapsulation labels over the communication connection using the connection signal transport framing (inherently part of the system, because using the connection signal transport framing is essential for the transmission); and

Tunneling command messages associated with the customer data flow (using tunneling sessions in setup and teardown of Pseudo Wires 3.1.).

Xiao does not teach using an optical connection and transmitting the command messages and data within the same optical signal transport frames.

Official notice is taken that using optical connection SONET/SDH and the same optical connection frames for data and commands is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add optical connection and using the same optical connection frames for data and commands to the system of Xiao to utilize existing optical connections and conserve the system bandwidth.

Regarding claim 16, Xiao teaches data packets as layer-2 packets (1.1.).

Regarding claim 17, Draft-ietf-pwe3-requirements-03.txt teaches data packets as Ethernet, ATM, Frame Relay packets over SONET (1.1.).

Regarding claim 16, Xiao teaches encapsulating the data packet plus appended encapsulating label in a packet over SONET frame (inherently part of the system, because encapsulating a packet in a SONET frame is essential for using SONET transport mechanism).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao. Xiao substantially teaches the limitations of claims 8 and 11 (see above) including terminating the optical connection and recovering the data packets.

Xiao does not teach determining an intended physical port to send out the extracted data packet.

Official notice is taken that determining an intended physical port is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine an intended physical port in the system of Xiao to simplify the transmission of the received data packet.

6. Claims 2, 3, 4, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao in view of Gregg (US 6,721,335).

Xiao substantially teaches the limitations of claims 1 and 8 (see above):

Including encapsulating label for the command messages to be transmitted between the edge nodes (inherently part of the system, because utilizing known encapsulation labels is essential for data packet tunneling).

Xiao does not teach using encapsulation label identifying a tunneled data as a command message.

Gregg teaches using labels identifying the content of the packet as a command message or data, segregating the command message (step 1001 in Fig. 10 and 19:6-45) and sending the command message to a switch controller of the receiving node (inherently part of the system, because Gregg teaches transmitting commands between nodes in switching network, so each node should have a switch controller).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use labels identifying the content of the packet as a command message or data of Gregg in the system of Xiao to simplify and increase the speed of the command messages identification.

In addition, regarding claim 15, Xiao teaches removing the encapsulation frame from the data packets and transmitting them to an intended destination based on the removed label (encapsulation and reconstruction in 1.1.).

Allowable Subject Matter

7. Claims 19-29 are allowed.
8. Claims 7 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 12/08/04 have been fully considered but they are not persuasive.

On pages 20-22 of the Response, Applicant argues the differences between the invention and Xiao reference.

Examiner believes that these arguments are irrelevant as they are not directed to the claims of the invention.

On page 23 of the Response, Applicant argues that Xiao does not disclose establishing a pseudo-wire connection directly over an optical connection and between the provider edge nodes of a communication network.

Examiner respectfully disagrees.

Xiao teaches a direct connection between the customer edge nodes 1 and 2 as shown on Fig. 1 over a communication network (inherently part of the system, because communication network is essential for disclosed PSN tunnel on Fig. 1).

Examiner admitted that Xiao does not teach establishing this direct connection over an optical network and took Official Notice.

G. Swallow, MPLS Advantages for traffic engineering, IEEE Communication, December, 1999, admitted as a prior art by Applicant is cited herein as evidence to support examiner's taking an Official Notice. Swallow clearly teaches using tunneling (page 55, LSP Tunnels) over SONET (page 56, Fast Rerouting).

On page 23 of the Response, Applicant argues that Xiao is teaching away from direct establishment of a pseudo-wire over the optical connection.

Examiner respectfully disagrees.

Xiao teaching of a direct establishment of a pseudo-wire does contradict an optical implementation of his method as suggested by Swallow. Examiner believes that Xiao method can be implemented over any optical communication network.

Examiner therefore believes that the cited references meet all the claims limitations and the rejection is proper.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dmitry Levitan
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03/29/05



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